

WHAT IS CLAIMED IS:

1. A control circuit of an electronic ballast for a fluorescent lamp, comprising:
a protection circuit capable of automatically stopping an oscillation circuit of an electronic ballast to generate an abnormal high AC voltage when a fluorescent lamp tube is defective, wherein the control circuit connects an output terminal P8 of the electronic ballast to a ground via a capacitor C11 and a resistor R8 in a series connection, and a junction between the capacitor C11 and resistor R8 is connected to an anode of a diode D12, and a cathode of the diode D12 is connected to a resistor R9 which in turn is connected to the ground via a capacitor C12, and the resistor R9 and capacitor C12 forms an integrator circuit, and the capacitor C12 is in a parallel connection with a resistor R10, and the resistor R10, capacitor C12, and resistor R9 are all connected to a cathode of a Zener diode D13, and an anode of the Zener diode D13 is connected to the ground via a capacitor C13 and to a gate of a SCR thyristor TH1, and a cathode of the SCR thyristor TH1 is connected to the ground, and an anode of the SCR thyristor TH1 is connected to a junction between a resistor R5 and a resistor R1 inside the electronic ballast and a cathode of a diode D11, and an anode of the diode D11 is connected to a terminal P3 of a primary winding T1A of a driving transformer of the electronic ballast; and
an automatic re-lamp circuit capable of lighting a newly-installed fluorescent lamp tube without switching off and on a supplying power after a defective lamp tube is taken down, wherein the automatic re-lamp circuit connects a direct current (DC) voltage positive output terminal of a filtered and rectified input alternating current (AC) power supply to a resistor R11, and

the resistor R11 is connected to the ground via a series connection of a resistor R12 and a capacitor C14, and a junction of the resistor R11 and resistor R12 is connected to a terminal P4 of a fluorescent lamp tube's filaments via a line A, and a resistor R13 connects a junction of the resistor R12 and capacitor C14 to an anode of diode D14, and a cathode of the diode D14 is connected to a base of a transistor Q3, and an emitter of the transistor Q3 is connected to the ground, and a collector of the transistor Q3 is connected to the anode of the SCR thyristor TH1 within the protection circuit.

2. The control circuit as claimed in Claim 1, wherein the capacitor C13 of the protection circuit is to prevent interference from high frequency noises.
3. The control circuit as claimed in Claim 1, wherein the capacitor C14 is to provide a by-pass so that an AC voltage from a filament is by-passed to a ground and does not affect the transistor Q3's normal operation under a normal lighting condition.